### CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS SYSTEM

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Database Version 8.1 (2005)

B539 Red Crossbill Loxia curvirostra

Family: Fringillidae Order: Passeriformes Class: Aves

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### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A rare to fairly common, nomadic inhabitant of most coniferous forest habitats throughout California, but prefers lodgepole pine. Distribution and abundance fluctuate in response to availability of mature pine nuts. Nesters most numerous in lodgepole pine forests of Cascade Range, Sierra Nevada, Warner and Sweetwater Mts., and in bristlecone and limber pine forests of White and probably Inyo, Panamint, and Grapevine Mts. Also nests in Mt. Pinos region, and probably in other ranges to the south. Nesters less numerous along coast, usually in Douglas-fir, spruce-fir, fir, and closed-cone pine forests of coastal slope and coastal ranges from Oregon border south to San Francisco Bay, and probably in Santa Cruz and Santa Lucia Mts. as well. Occasionally nests in planted conifers along southern coast, as on Palos Verdes Peninsula, Los Angeles Co. A rare, erratic winter visitor to pinyon-juniper habitat throughout Great Basin, to plantings of conifers in coastal lowlands of central and southern California, and to other lowland habitats (Grinnell and Miller 1944, Garrett and Dunn 1981).

### SPECIFIC HABITAT REQUIREMENTS

Feeding: Extracts seeds from conifer cones by prying apart cone scales with crossed mandibles and lifting out seeds with tongue. To a lesser extent, forages for other seeds, buds of broad-leaved trees, fruits, and some insects; also tears apart leaf galls. Forages in trees and on ground. Has been observed eating salt, salt-impregnated earth, and old rodent bones (Aldrich 1939, Bent 1968, Payne 1972).

Cover: Appears to prefer coniferous forests with open to moderate canopy. Conifers provide singing posts, nesting, roosting, perching, and other cover.

Reproduction: Builds cup-shaped nest of twigs, rootlets, strips of bark; lined with fine grasses, mosses, feathers, fur. Nest located in a conifer, usually out on a branch or in a cluster of pine needles 1.5 to 25 m (5-80 ft) above ground, but usually high up (Bent 1968).

Water: Drinks and bathes regularly, at least in Europe (Mould 1974); water apparently required.

Pattern: Availability of mature conifer seeds more important than kind of conifer habitat, although lodgepole pine preferred. In Sierra Nevada, most numerous where conifer forests with open to moderate canopy border meadows, lakes, or streams.

### SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Unpredictable, nomadic movements linked to fluctuations in conifer seed crops. Out-of-state visitors appear irregularly in California, usually coming from the north in fall, winter, or spring.

Home Range: No data found.

Territory: Territoriality has not been reported. Lawrence (1949) reported nests as close as 23 m (75 ft), and Payne (1972) reported individuals singing within 20 m (66 ft) of a neighboring nest.

Reproduction: Breeds mostly from February through June, although highly variable. Known to breed at any time of year in response to abundance of mature conifer seeds, but few California nesting records found (Kemper 1959, Bent 1968). In Colorado Rockies, most bred in winter before warm spring temperatures opened cones and scatter seeds (Bailey et al. 1953). Monogamous; clutch size 2-5 eggs, usually 3 or 4. Raises 1 brood per yr. Incubation 12-16 days, by female only. Altricial young tended by both parents and leave nest at 17-22 days, although dependent on parents for 3-4 wk Ionger (Bent 1968, Harrison 1978).

Niche: Gregarious and nomadic; flocks may wander widely in search of mature conifer seeds, even descending into valleys and foothills some years.

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